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05 May 1998 (05.05.98)

Applicant's or agent's file reference

FORS-03345

Priority date (day/month/year) 05 May 1997 (05.05.97)

Applicant

DONG, Fang et al

X in the	demand filed with the	International	Preliminary Exa	mining Autho	rity on:		
	·	04 De	cember 1998	(04.12.98)			
in a no	tice effecting later ele	ection filed wit	h the Internation	al Bureau on	:		
	· ·						
The election	X was						
	was not						

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Authorized officer

A. Karkachi

Telephone No.: (41-22) 338.83.38

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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference		SeeNotificat	tionofTransmittalofInternational Preliminary			
AA979(F9822)	FOR FURTHER ACTION	Examination	n Report (Form PCT/IPEA/416)			
International application No. PCT/JP98/01885 International filing date (day/month/year) 23 April 1998 (23.04.1998) Priority date (day/month/year) 24 April 1997 (24.04.1997)						
International Patent Classification (IPC) or n C08G 77/385, 77/24, C07F 7/12	ational classification and IPC					
Applicant	ASAHI GLASS COMPA	ANY LTD.				
This international preliminary examinand is transmitted to the applicant action.		l by this Intern	ational Preliminary Examining Authority			
2. This REPORT consists of a total of	sheets, including	ng this cover s	heet.			
amended and are the basis for		ning rectifica	on, claims and/or drawings which have been tions made before this Authority (see Rule			
These annexes consist of a to	tal of sheets.					
3. This report contains indications relating to the following items:						
I Basis of the report	I Basis of the report					
II Priority	II Priority					
III Non-establishment o	of opinion with regard to novelty	y, inventive ste	ep and industrial applicability			
IV Lack of unity of inve	ention					
Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement						
VI Certain documents c	VI Certain documents cited					
VII Certain defects in the international application						
VIII Certain observations on the international application						
Date of submission of the demand	Date of	f completion o	f this report			
22 October 1998 (22.10.	.1998)	23 N	March 1999 (23.03.1999)			
Name and mailing address of the IPEA/JP . Japanese Patent Office, 4-3 Kasumigas Chiyoda-ku, Tokyo 100-8915, Japan	seki 3-chome	ized officer				
Facsimile No. Telephone No. (81-3) 3581 1101						



PCT/JP98/01885

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

i. Dasis o	ne report
1. With r	ard to the elements of the international application:*
\boxtimes	e international application as originally filed
	e description:
	ges, as originally filed ges, filed with the demand
	ges, filed with the letter of
L	e claims:
•	ges, as originally filed
	ges, as amended (together with any statement under Article 19
	ges, filed with the demand
	ges, filed with the letter of
	e drawings:
	ges, as originally filed
	ges, filed with the demand
	ges, filed with the letter of
<u> </u>	
	equence listing part of the description:
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the into	and to the language , all the elements marked above were available or furnished to this Authority in the language in which national application was filed, unless otherwise indicated under this item. Ements were available or furnished to this Authority in the following language which is: the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). The language of publication of the international application (under Rule 48.3(b)). The language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/55.3).
3. With prelim	gard to any nucleotide and/or amino acid sequence disclosed in the international application, the international ary examination was carried out on the basis of the sequence listing:
Ц	ntained in the international application in written form.
Щ	ed together with the international application in computer readable form.
	mished subsequently to this Authority in written form.
	mished subsequently to this Authority in computer readable form.
	e statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the ernational application as filed has been furnished.
	e statement that the information recorded in computer readable form is identical to the written sequence listing has en furnished.
4.	e amendments have resulted in the cancellation of:
	the description, pages
וֹ	the claims, Nos.
וֹ	the drawings, sheets/fig
5. T	s report has been established as if (some of) the amendments had not been made, since they have been considered to go
* Replace	ond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).** ent sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to port as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16).
and 70.	
** Any rep	cement sheet containing such amendments must be referred to under item 1 and annexed to this report.



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP98/01885

tatement			
Novelty (N)	Claims	1-10	YE
	Claims		NO
Inventive step (IS)	Claims	1-10	YE
	Claims		NO
Industrial applicability (IA)	Claims	1-10	YE
	Claims		NO
Citations and explanations		<u></u>	

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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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A1

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08/851,588 5 May 1997 (05.05.97) US 08/934,097 19 September 1997 (19.09.97) US 09/034,205 3 March 1998 (03.03.98) US Ann, D. [US/US]; 5905 Hammersley Road, Madison, WI 53711 (US). ANDERSON, Todd, A. [US/US]; 2302 University Avenue #323, Madison, WI 53705 (US). DAHLBERG, James, E. [US/US]; 1119 Merrill Springs Road, Madison, WI 53705-1316 (US).

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Madison, WI 53717 (US). NERI, Bruce, P. [US/US]; 5714

Kilkenny Place, Madison, WI 53711 (US). BROW, Mary,

(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application

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(71) Applicant (for all designated States except US): THIRD WAVE TECHNOLOGIES, INC. [US/US]; 2800 South Fish Hatchery Road, Madison, WI 53711 (US).

(81) Designated States: AU, CA, JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

(72) Inventors; and

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(54) Title: TARGET-DEPENDENT REACTIONS USING STRUCTURE-BRIDGING OLIGONUCLEOTIDES

(57) Abstract

The present invention relates to methods and compositons for analyzing nucleic acids. In particular, the present invention provides methods and compositions for the detection and characterization of nucleic acid sequences and sequence changes. The methods of the present invention permit the detection and/or identification of genetic polymorphism such as those associated with human disease and permit the identification of pathogens (e.g., viral and bacterial strain identification).

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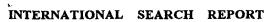
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INTERNATIONAL SEARCH REPORT

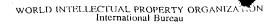
International application No. PCT/US98/03194

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	SSIFICATION OF SUBJECT MATTER			
	:C07H 21/04, 21/02; C12Q 1/68 :435/6; 536/23.1, 24.3, 24.31, 24.32			
	o International Patent Classification (IPC) or to both	national classification and IP	c	
B. FIEL	DS SEARCHED			
Minimum d	ocumentation searched (classification system follow	ed by classification symbols)		
U.S. :	435/6; 536/23.1, 24.3, 24.31, 24.32			
Documentat NONE	ion searched other than minimum documentation to the	e extent that such documents a	re included in the fields scarched	
	ata base consulted during the international search (ame of data base and, where	practicable, search terms used)	
C. DOC	UMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where a	ppropriate, of the relevant pas	sages Relevant to claim No.	
Y	LIMA W., et al., Implication of Oligonucleotide Hybridization Kinetic pages 12055-12061, see entire docum	i i		
Y	ZARRINKAR, P., et al., The Kinetic Folding Pathway of the Tetrahmena Ribozyme Reveals Possible Similarities Between RNA and Protein Folding. Nature Structural Biology. May 1996, Vol. 3, No. 5, pages 432-438, see entire document.			
Y	ZARRINKAR, P., et al., Kinetic In Science. 12 August 1994. Vol. 263 document.			
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X Furthe	er documents are listed in the continuation of Box (See patent family	y annex.	
• Spe	cial categories of cited documents:		d after the international filing date or priority with the application but cited to understand	
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•	ument referring to an oral disclosure, use, exhibition or other	considered to involve combined with one or m being obvious to a perso	an inventive step when the document is ore other such documents, such combination on skilled in the art	
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facsimile No		Telephone No. / (703) 308	-0196	
orm PCT/IS	A/210 (second sheet)(July 1992)*	(/	· // /	



International application No. PCT/US98/03194

C (Continue	tion). DOCUMENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim N
X Y	FEDEROVA, O., et al., The Influence of the Target Structure on the Efficiency of Alkylination of Single Stranded DNA with the Reactive Derivitives of Antisense Oligonucleotides. FEBS. May 1992. Vol. 302, No. 1, pages 47-40, see entire document.	1-4, 12 5-11, 13-27
х Y	GAMPER, H., et al., Solution Hybridization of Crosslinkable DNA Oligonucleotides to Bacteriophage M13 DNA. J. Mol. Biol. 1987. Vol. 197, pages 349-362, see entire document.	1-4, 12, 28-32, 40, 81, 82 5-11, 13-27, 33- 39, 41-66
X Y	SOUTHERN, E., Detection of Specific Sequences Among DNA Fragments Seperated by Gel Electrophoresis. J. Mol. Biol. 1975. Vol. 98, pages 503-517, see entire document.	1-4, 12, 14 5-13, 15-27
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08/851,588 5 May 1997 (05.05.97) 08/934,097 19 September 1997 (19.09.9' 09/034,205 3 March 1998 (03.03.98)	7) t	Road, Madison, WI 53705-1316 (US). (74) Agents: CARROLL, Peter, G. et al.; Medlen & Carroll, LLP, Suite 2200, 220 Montgomery Street, San Francisco, CA 94104 (US).
(63) Related by Continuation (CON) or Continuation-in (CIP) to Earlier Application US Filed on 3 March 1998 (6	.05 (C)	
 (71) Applicant (for all designated States except US): THIRIT TECHNOLOGIES, INC. [US/US]; 2800 South Fisery Road, Madison, WI 53711 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): DONO [CNUS]; 203 Eagle Heights, Madison, W (US) LYAMICHEV, Victor I. [RU/US]; 2523 (Court, Madison, WI 53711 (US), PRUDENT, J [US/US]; 3750 Country Grove Drive, Madison, V (US), FORS, Lance [US/US]; 12 Hidden Hollogical 	S, Fa I 537 Carried ames, WI 537	h- Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments. Ide R. 19

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